

RF Test Report

Applicant : Molekule Group, Inc.
Product Name : PECOAir, PECOAir+
Trade Name : Molekule
Model Number : CD1, CD2
Applicable Standard : FCC 47 CFR PART 15 SUBPART C
Received Date : Jun. 26, 2026
Test Period : Jul. 02, 2026 ~ Jul. 16, 2026
Issued Date : Aug. 11, 2026

Issued by

Eurofins E&E Wireless Taiwan Co., Ltd.
No. 140-1, Changan Street, Bade District,
Taoyuan City, Taiwan (R.O.C.)
Tel : +886-3-2710188 / Fax : +886-3-2710190



Taiwan Accreditation Foundation accreditation number: 1330
Frequency Range: 9 kHz to 325 GHz
Bade test site :
Test Firm Registration Number: 226252
Test Firm Designation Number: TW0010
Wugu test site :
Test Firm Registration Number: 191812
Test Firm Designation Number: TW0034

Note:

1. The test results are valid only for samples provided by customers and under the test conditions described in this report.
2. This report shall not be reproduced except in full, without the written approval of Eurofins E&E Wireless Taiwan Co., Ltd.
3. The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.

Revision History

Rev.	Issued Date	Description	Revised by
00	Aug. 11, 2026	Initial Issue	Abby Huang

Verification of Compliance

Applicant : Molekule Group, Inc.

Product Name : PECOAir, PECOAir+

Trade Name : Molekule

Model Number : CD1, CD2

FCC ID : 2AJ7M-CDX

Applicable Standard : FCC 47 CFR PART 15 SUBPART C

Test Result : Complied

Issued By : Eurofins E&E Wireless Taiwan Co., Ltd.
No. 140-1, Changan Street, Bade District,
Taoyuan City, Taiwan (R.O.C.)
Tel : +886-3-2710188 / Fax : +886-3-2710190



Taiwan Accreditation Foundation accreditation number: 1330

Eurofins E&E Wireless Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Eurofins E&E Wireless Taiwan Co., Ltd. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Approved By :

Kai Yu Yang / RF Supervisor

TABLE OF CONTENTS

1	General Information.....	5
1.1.	Summary of Test Result.....	5
1.2.	Testing Location.....	6
1.3.	Measurement Uncertainty.....	6
1.4.	Test Site Environment.....	6
2	EUT Description.....	7
3	Test Methodology	8
3.1.	Mode of Operation	8
3.2.	EUT Test Step.....	8
3.3.	Configuration of Test System Details	9
3.4.	Test Instruments	11
4	Measurement Procedure	13
4.1.	AC Power Line Conducted Emission Measurement	13
4.2.	Radiated Emission Measurement	15
4.3.	Frequency Stability Measurement	18
4.4.	20 dB Bandwidth Measurement	19
4.5.	Antenna Requirement.....	20
5	Test Results	21
5.1.	Conducted Emission	21
5.2.	Radiated Emission Measurement	29
5.3.	Conducted Test Results	45

Appendix A. Test Setup Photographs

1 General Information

1.1. Summary of Test Result

Standard	Item	Results	Remark
15.203	Antenna Requirement	Meet Require	---
15.207(a)	AC Power Conducted Emission	PASS	---
15.225 (a), (b), (c), (d) 15.209	Radiated Emission Limits	PASS	---
15.225(e)	Frequency Stability	PASS	---
15.215(c)	20 dB Bandwidth	----	---
CFR 47 Part 15.225 / ANSI C63.10-2020+Cor.1-2023			

Standard	Description
CFR47, Part 15, Subpart C	Intentional Radiators
ANSI C63.10-2020+Cor.1-2023	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

Decision Rule

- ☒ Uncertainty is not included.
☐ Uncertainty is included.

1.2. Testing Location

Lab Name: Eurofins E&E Wireless Taiwan Co., Ltd.

Site Address: ☒ No. 140-1, Changan Street, Bade District, Taoyuan City, Taiwan (R.O.C.)

Site Address: ☐ No. 2, Wuquan 5th Rd. Wugu Dist., New Taipei City, Taiwan (R.O.C.)

1.3. Measurement Uncertainty

Test Item	Frequency	Uncertainty				
		BD		WG		
Conducted Emission	150 kHz ~ 30 MHz	2.7 dB		2.6 dB		
RF Bandwidth		4.5 %		4.5 %		
Frequency Stability		1.3 x 10 ⁻⁷		1.3 x 10 ⁻⁷		
Test Item	Frequency	Uncertainty				
		96601-BD	96603-BD	96602-WG	96603-WG	96604-WG
Radiated Emission	9 kHz ~ 30 MHz	1.8 dB	1.8 dB	1.6 dB	1.6 dB	1.7 dB
	30 MHz ~ 1000 MHz	4.7 dB	4.6 dB	4.7 dB	4.7 dB	4.5 dB
	1000 MHz ~ 18000 MHz	4.4 dB	4.5 dB	4.5 dB	4.7 dB	5.0 dB
	18000 MHz ~ 26500 MHz	3.6 dB	3.8 dB	3.8 dB	4.0 dB	4.3 dB
	26500 MHz ~ 40000 MHz	3.9 dB	3.9 dB	4.0 dB	4.0 dB	4.4 dB

1.4. Test Site Environment

Items	Required (IEC 60068-1)	Interval(*)
Temperature (°C)	15-35	20-30
Humidity (%RH)	25-75	45-75

(*)The measurement ambient temperature is within this range.

2 EUT Description

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity

Applicant	Molekule Group, Inc. 10455 Riverside Dr #100 Palm Beach Gardens, FL 33410, US
Product Name	PECOAir, PECOAir+
Trade Name	Molekule
Model Number	CD1, CD2
Models different description	CD1 is the model number for PECOAir, it has no LCD display CD2 is the model number for PECOAir+ it has a LCD display and upgraded sensor suite
FCC ID	2AJ7M-CDX
Frequency Range	13.56 MHz
Modulation Type	ASK
Number of Channels	1 Channel
Data Rate	Type A: 106 kbit/s Type B: 106 kbit/s Type F: 212/424 kbit/s Type V: 26.48 kbit/s
Antenna Type	Coil Antenna
Operate Temp. Range	0 ~ 45 °C
EUT Power Rating	24 VDC, 4.16 A from external power supply

Note : All measurements were performed radiated and therefore additional antenna gain is not required.

Testing Sample No.		
Test Item		Sample Number
Radiated Emissions	Below 1 GHz	C266342_A002(CD1) 、 C266342_A003(CD2)
Conducted		C266342_A002(CD1) 、 C266342_A003(CD2)
Conducted Emission		C266342_A002(CD1) 、 C266342_A003(CD2)

EUT Modification Description :

Market demand dictates the differentiation between series and models. The main differences lie in the LCD display and upgraded sensor suite, as shown in the table below. RF components, other circuit designs, printed circuit boards, etc., remain the same.

Model	LCD display	upgraded sensor suite
CD1		
CD2	V	V

After the evaluation, Laboratory assessment of the difference between CD2 and CD1 requires verification of Conducted Emission & Radiated Emissions (30MHz to 1GHz) and recording of the results. For other items, CD2 test data can be used.

3 Test Methodology

3.1. Mode of Operation

In the test report use EUT model: CD2 to operate testing.

The following test mode(s) were scanned during the preliminary test :

Pre-Test Mode	Final-Test Mode
Transmit Mode	V

The EUT had been pre-tested on Type A, Type B, Type F, Type V. The worst case was found when data rate was Type A and chosen for final test.

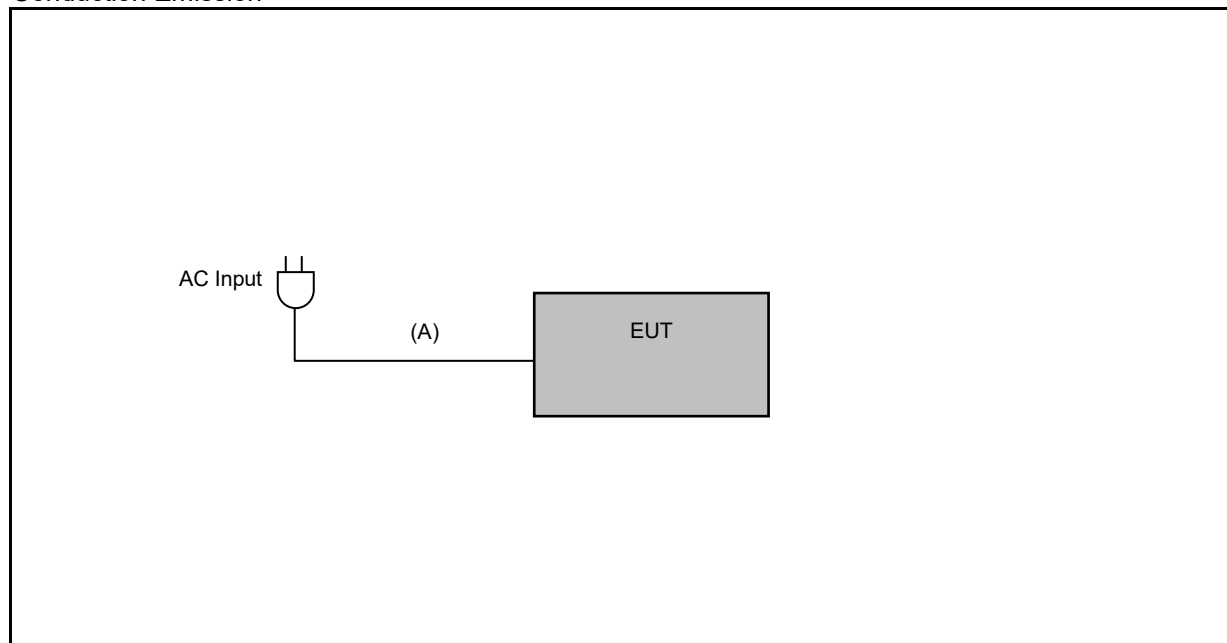
Eurofins has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation.

3.2. EUT Test Step

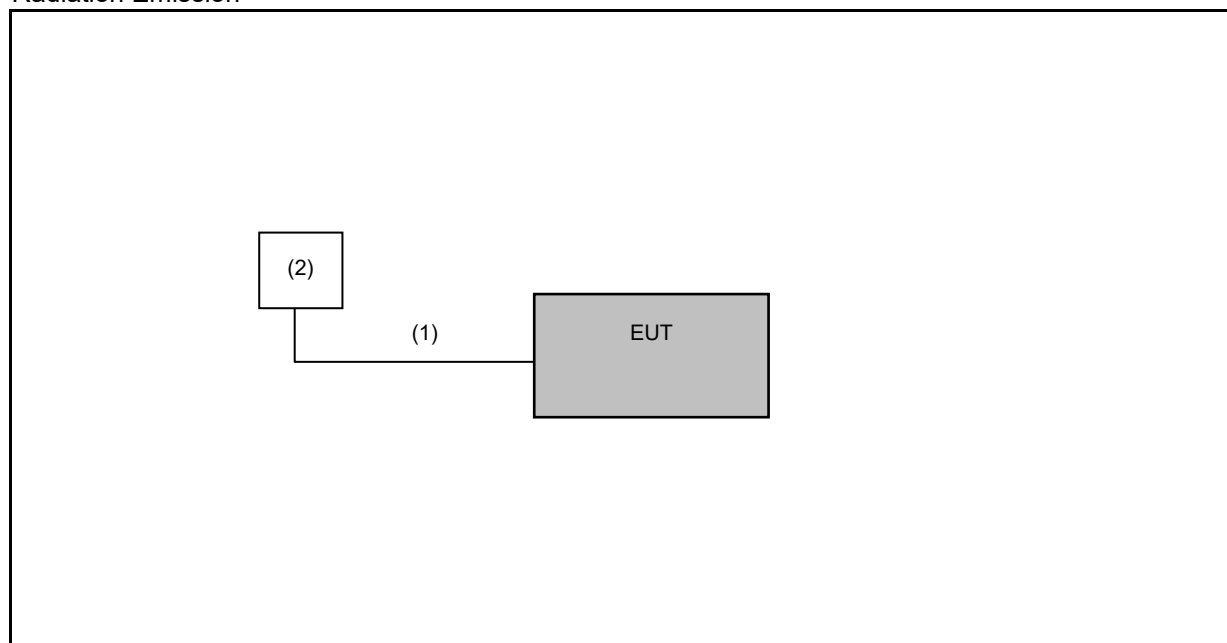
1.	Setup the EUT shown on "Configuration of Test System Details."
2.	Turn on the power of all equipment.
3.	The EUT will start to operate function.

3.3. Configuration of Test System Details

Conduction Emission



Radiation Emission



Devices Description					
Product		Manufacturer	Model Number	Serial Number	Power Cord
(1)	USB Cable	MI	K23230	---	---
(2)	Notebook	ASUS	P5440F	---	---
(3)	POWER SUPPLY	SHENZHEN XINSPower TECHNOLOGY CO.,LTD	A1014-2404160I	---	---

3.4. Test Instruments

For Conducted Emission

Test Period: Jul. 16, 2026

Testing Engineer: Jayson Hsieh

Test Site		Conduction01-BD				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Test Receiver	R&S	ESCI	100367	May 22, 2026	1 year
☒	LISN	R&S	ENV216	101040	Feb. 24, 2026	1 year
☒	RF Cable	Woken	00100D1380194M	TE-02-03	Jun. 08, 2026	1 year
☒	Software	EZ EMC	1.1.4.3	N/A	N.C.R.	---

For Conducted

Test Period: Jul. 14, 2026

Testing Engineer: John Chen

Test Site		RF01-BD				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Spectrum Analyzer (10 Hz~26.5 GHz)	Keysight	N9010B	MY63460166	Mar. 09, 2026	1 year
☒	Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	Mar. 24, 2026	1 year
☒	Power Supply	KEITHLEY	2303	4045290	Dec. 18, 2025	1 year

Note: N.C.R. = No Calibration Request.

For Radiated Emissions

Test Period: Jul. 02, 2026

Testing Engineer: Bruce Chen

Test Site		96603-BD				
Radiation test sites		Semi Anechoic Room				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9020B	MY60112363	Jan. 09, 2026	1 year
☒	Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A11119	Jan. 09, 2026	1 year
☒	Loop Antenna (9 kHz~30 MHz)	COM-POWER CORPORATION	AL-130	121014	Mar. 30, 2026	1 year
☒	Trilog Broadband Antenna (30 kHz~1 GHz)	Schwarzbeck Mess-Elektronik	VULB9168	841	Mar. 23, 2026	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A 100	J11005	Aug. 06, 2025	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A 900	J11003	Aug. 06, 2025	1 year
☒	Coaxial Cable	Titan	CFD400NL-LW	171219	Aug. 06, 2025	1 year
☒	Software	R_RAM	1.4	N/A	N.C.R.	---

Note: N.C.R. = No Calibration Request.

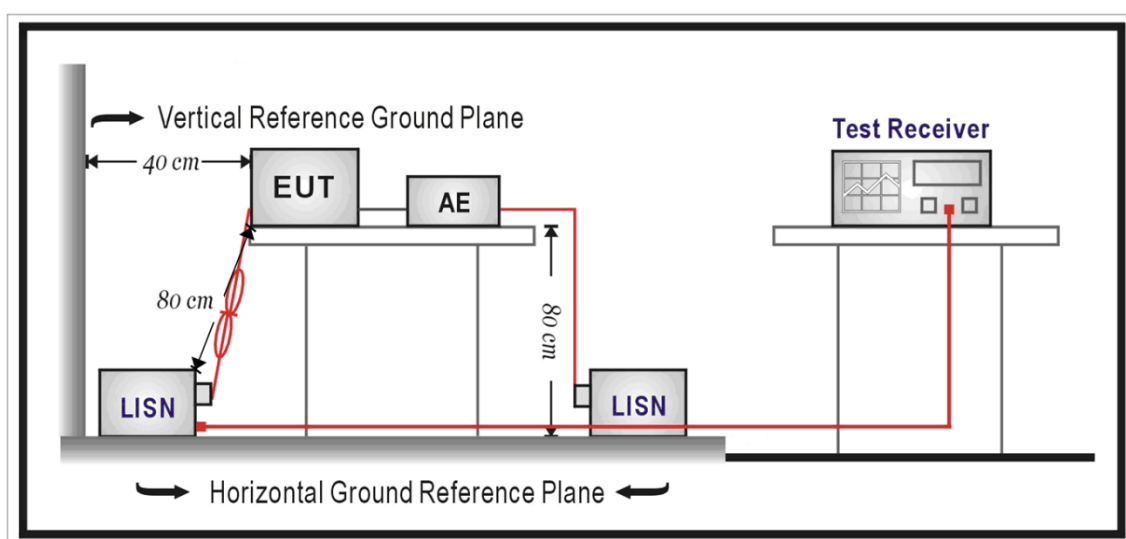
4 Measurement Procedure

4.1. AC Power Line Conducted Emission Measurement

■ Limit

Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

■ Test Setup



■ Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a $50\ \Omega // 50\ \mu\text{H}$ coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a $50\ \Omega // 50\ \mu\text{H}$ coupling impedance with 50 ohm termination.

Tabletop device shall be placed on a non-conducting platform, of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The wall of screened room shall be located 40 cm to the rear of the EUT. Other surfaces of tabletop or floor standing EUT shall be at least 80 cm from any other ground conducting surface including one or more LISNs. For floor-standing device shall be placed under the EUT with a 12 mm insulating material.

Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a resolution bandwidth of 9 kHz. The equipment under test (EUT) shall be meet the limits in section 4.1, as applicable, including the average limit and the quasi-peak limit when using respectively, an average detector and quasi-peak detector measured in accordance with the methods described of related standard. When all of peak value were complied with quasi-peak and average limit from 150 kHz to 30 MHz then quasi-peak and average measurement was unnecessary.

The AMN shall be placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for AMNs mounted on top of the ground reference plane. This distance is between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8 m from the AMN. If the mains power cable is longer than 1 m then the cable shall be folded back and forth at the centre of the lead to form a bundle no longer than 0.4 m. All of interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long. All of EUT and AE shall be separate place more than 0.1 m. All $50\ \Omega$ ports of the LISN shall be resistively terminated into $50\ \Omega$ loads when not connected to the measuring instrument.

If the reading of the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the higher reading shall be recorded with the exception of any brief isolated high reading which shall be ignored.

4.2. Radiated Emission Measurement

■ Limit

According to §15.225,

- (a) The field strength of any emissions within the band 13.553 – 13.567 MHz shall not exceed 15,848 microvolt / meter at 30 meters.
- (b) Within the bands 13.410 – 13.553 MHz and 13.567 -13.710 MHz, the field strength of any emissions shall not exceed 334 microvolt / meter at 30 meters.
- (c) Within the bands 13.110 – 13.410 MHz and 13.710 – 14.010 MHz the field strength of any emissions shall not exceed 106 microvolt / meter at 30 meters.
- (d) The field strength of any emissions appearing outside of the 13.110 – 14.010 MHz and shall not exceed the general radiated emission limits in §15.209.

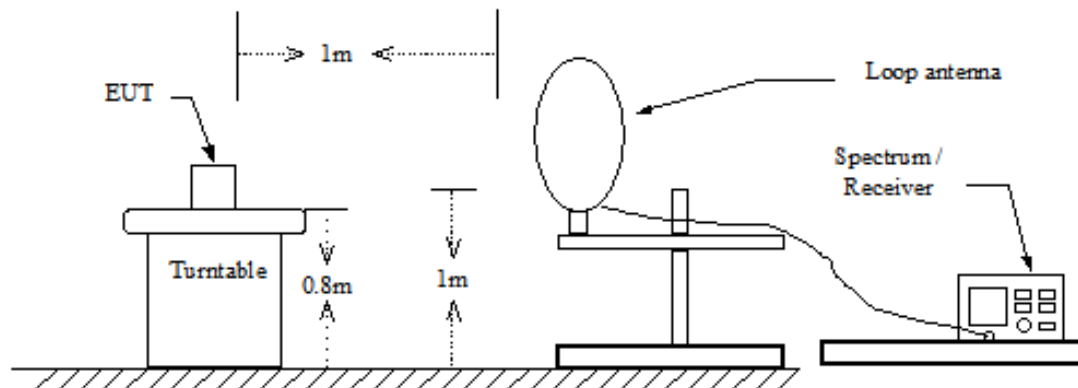
According to §15.225(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μ V/m at meter)	Measurement Distance (meter)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 - 88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

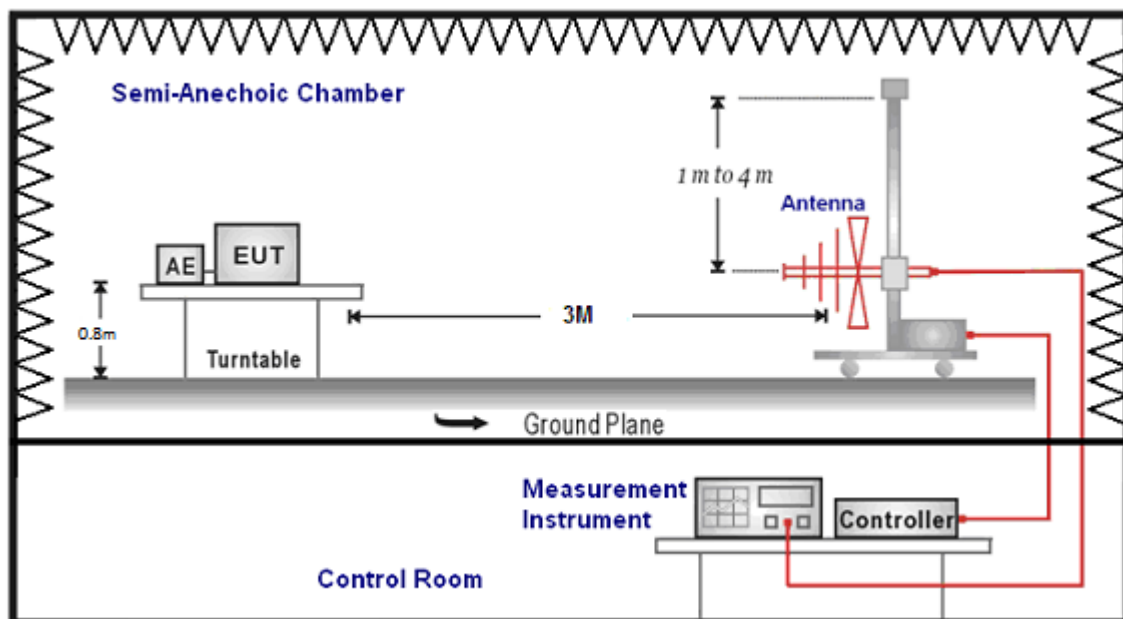
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

■ Setup

9 kHz ~ 30 MHz



30 MHz ~ 1 GHz



■ Test Procedure

Final radiation measurements were made on a three-meter Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. During the test, EUT was set to transmit continuously & Measurement's spectrum range from 9 kHz to 26 GHz (or 9 kHz to 10th harmonic) is investigated.

For measurements below 30 MHz the resolution bandwidth is set to 10 kHz for peak detection measurements or 9 kHz for quasi-peak detection measurements. The video bandwidth is 3 times of the resolution bandwidth.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz, the resolution bandwidth was set to 1 MHz, and the video bandwidth was set to 3 MHz for peak measurements, and the average measurements were performed using a duty cycle correction factor.

Note:

(1) DCCF (dB) = $20 \times \log(\text{maximum dwell time within } 100 \text{ ms} / 100)$

(2) Average Emission (dBuV/m) = Peak Emission (dBuV/m) + DCCF (dB)

A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization. Biconilog/Horn Antenna were used in frequency 30 MHz to 18 GHz at a distance of 3 meter. Loop/Horn Antenna was used in frequency 9 kHz to 30 MHz and 18 to 26 GHz at a distance of 1 meter. The antenna at an angle toward the source of the emission. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20 dB/decade).

For testing above 1 GHz, the emission level of the EUT in peak mode was 20 dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Result (dBuV/m) = Reading (dBuV) + Correct Factor (dB/m)

Correct Factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB)

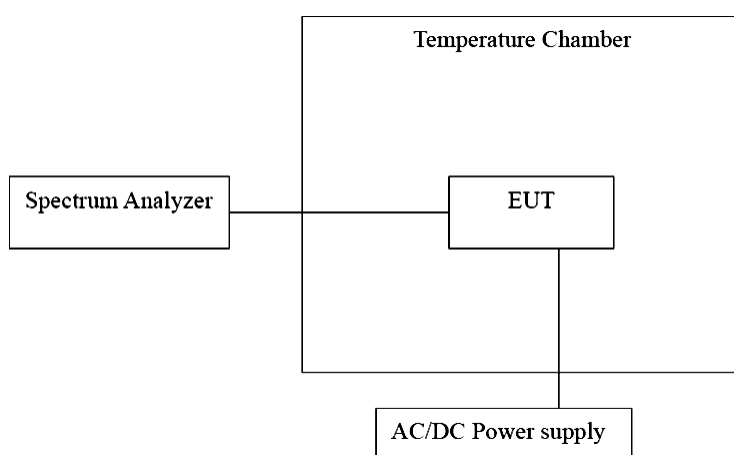
Data of measurement within this frequency range without mark in the table above means the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.

4.3. Frequency Stability Measurement

■ Limit

According to §15.207(e), the frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

■ Test Setup



■ Test Procedure

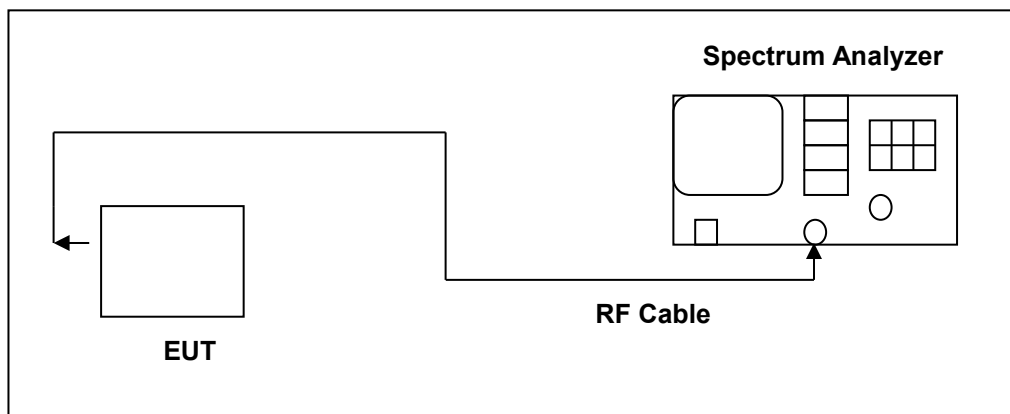
1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the environment into appropriate environment.
4. Set the spectrum analyzer as RBW = 1 kHz, VBW = RBW, Span = 200 kHz, Sweep = auto.
5. Mark the peak frequency and measure the frequency tolerance using frequency counter function.
6. Repeat until all the results are investigated.

4.4. 20 dB Bandwidth Measurement

■ **Limit**

N/A

■ **Test Setup**



■ **Test Procedure**

For 20 dB Bandwidth:

Analyzer used the following settings:

1. Span = between 2 times and 5 times the OBW
2. RBW = 1 % to 5 % of the OBW (Not less than 0.1 kHz)
3. VBW $\geq 3 \times$ RBW
4. Detector function = peak
5. Trace = max hold

The trace was allowed to stabilize. The EUT was transmitting at its maximum data rate. The marker-to-peak function was used to set the marker to the peak of the emission. The marker-delta function was used to measure 20 dB down one side of the emission. The marker-delta function and marker were moved to the other side of the emission until it was even with the reference marker. The marker-delta reading at this point was the 20 dB bandwidth of the emission.

4.5. Antenna Requirement

■ Require

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

■ Antenna Connector Construction

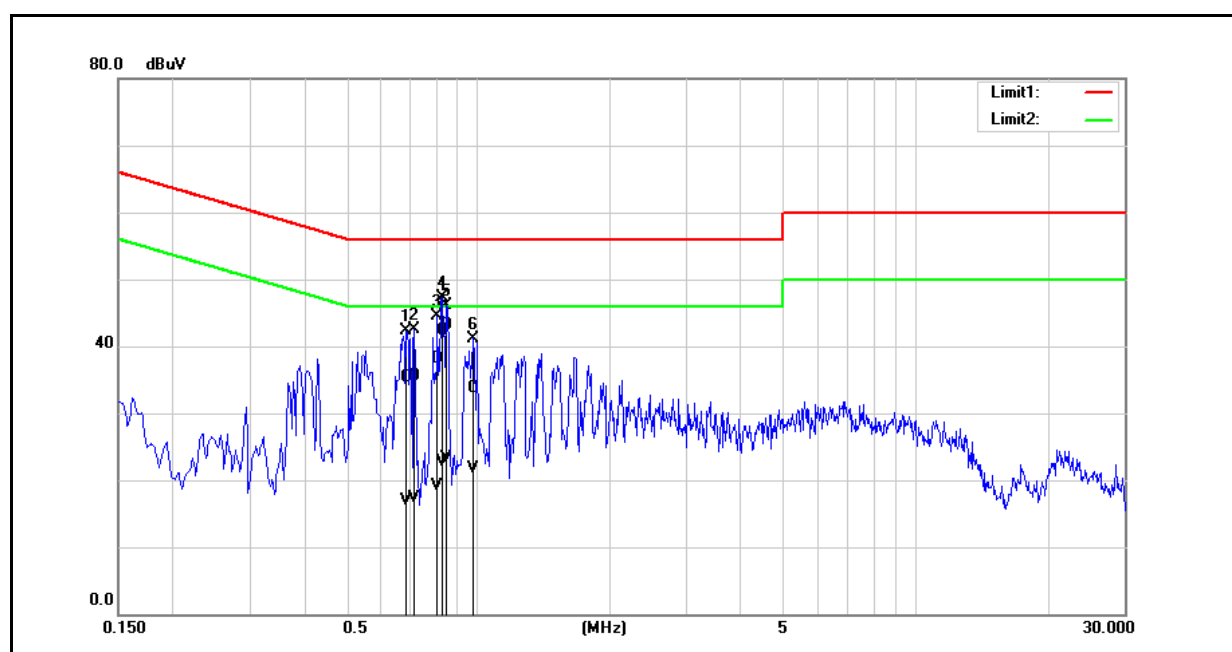
The antenna connector used in this product is internal antenna, cannot be replaced by the end-user.
See section 2 – antenna information.

5 Test Results

5.1. Conducted Emission

Model Number: CD2	Module 1
-------------------	----------

Standard:	FCC Part 15.225	Line:	L1
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Transmit Mode		
Description:			

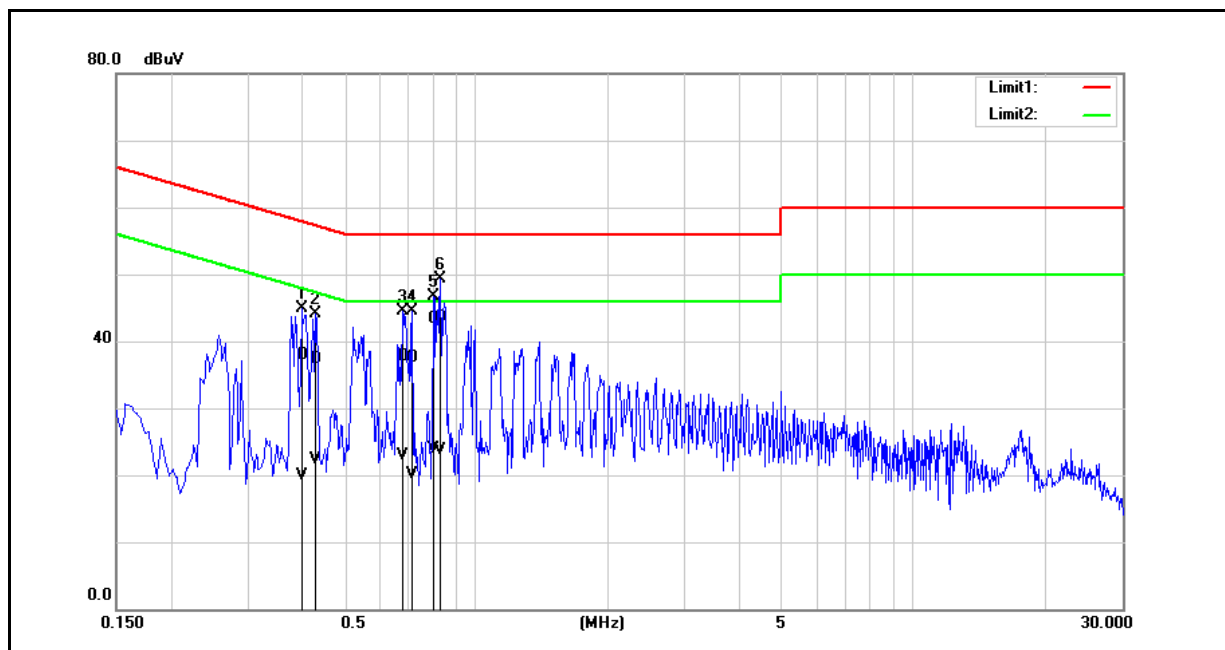


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.6860	25.62	7.12	9.71	35.33	16.83	56.00	46.00	-20.67	-29.17	Pass
2	0.7140	25.77	7.57	9.71	35.48	17.28	56.00	46.00	-20.52	-28.72	Pass
3	0.8060	28.43	9.47	9.71	38.14	19.18	56.00	46.00	-17.86	-26.82	Pass
4	0.8300	32.69	13.03	9.71	42.40	22.74	56.00	46.00	-13.60	-23.26	Pass
5	0.8460	33.31	13.50	9.71	43.02	23.21	56.00	46.00	-12.98	-22.79	Pass
6	0.9780	24.08	12.09	9.71	33.79	21.80	56.00	46.00	-22.21	-24.20	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15.225	Line:	N
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Transmit Mode		
Description:			



No.	Frequency (MHz)	QP reading (dBμV)	AVG reading (dBμV)	Correction factor (dB)	QP result (dBμV)	AVG result (dBμV)	QP limit (dBμV)	AVG limit (dBμV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.3980	28.32	10.29	9.66	37.98	19.95	57.90	47.90	-19.92	-27.95	Pass
2	0.4300	27.63	12.60	9.66	37.29	22.26	57.25	47.25	-19.96	-24.99	Pass
3	0.6780	27.99	13.19	9.67	37.66	22.86	56.00	46.00	-18.34	-23.14	Pass
4	0.7140	27.82	10.45	9.67	37.49	20.12	56.00	46.00	-18.51	-25.88	Pass
5	0.7980	33.62	14.22	9.67	43.29	23.89	56.00	46.00	-12.71	-22.11	Pass
6	0.8300	33.79	14.07	9.67	43.46	23.74	56.00	46.00	-12.54	-22.26	Pass

Note: 1. Result (dBμV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Model Number: CD2

Module 2

Standard: FCC Part 15.225

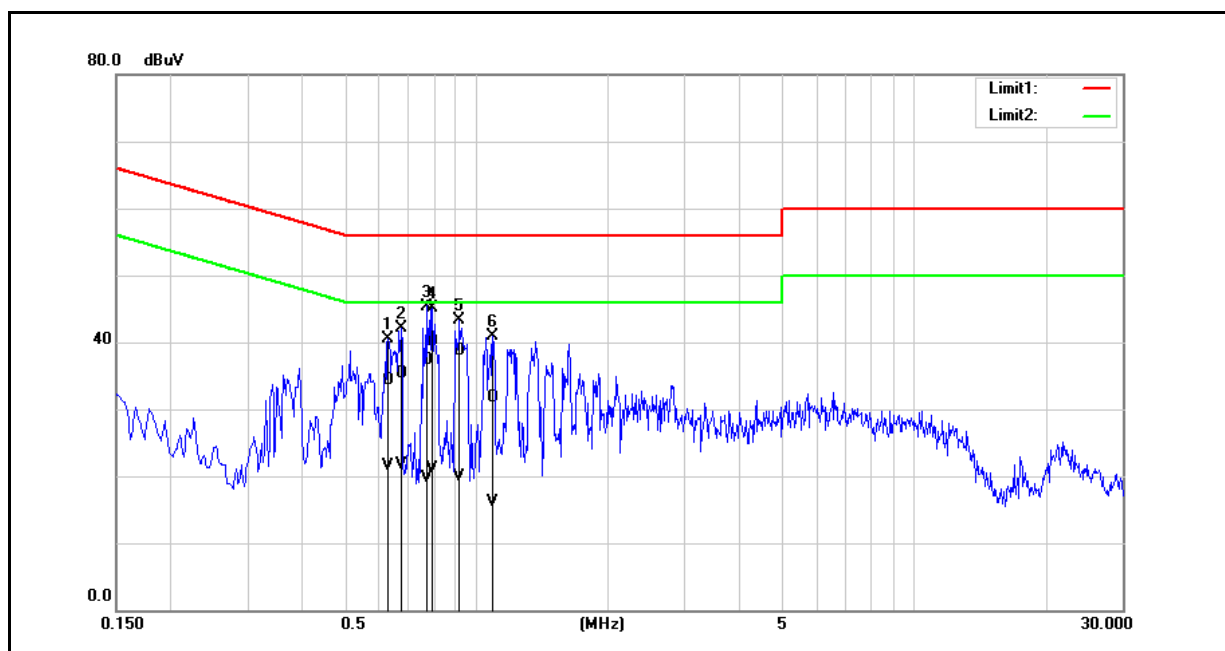
Line: L1

Test item: Conducted Emission

Power: AC 120 V/60 Hz

Mode: Transmit Mode

Description:

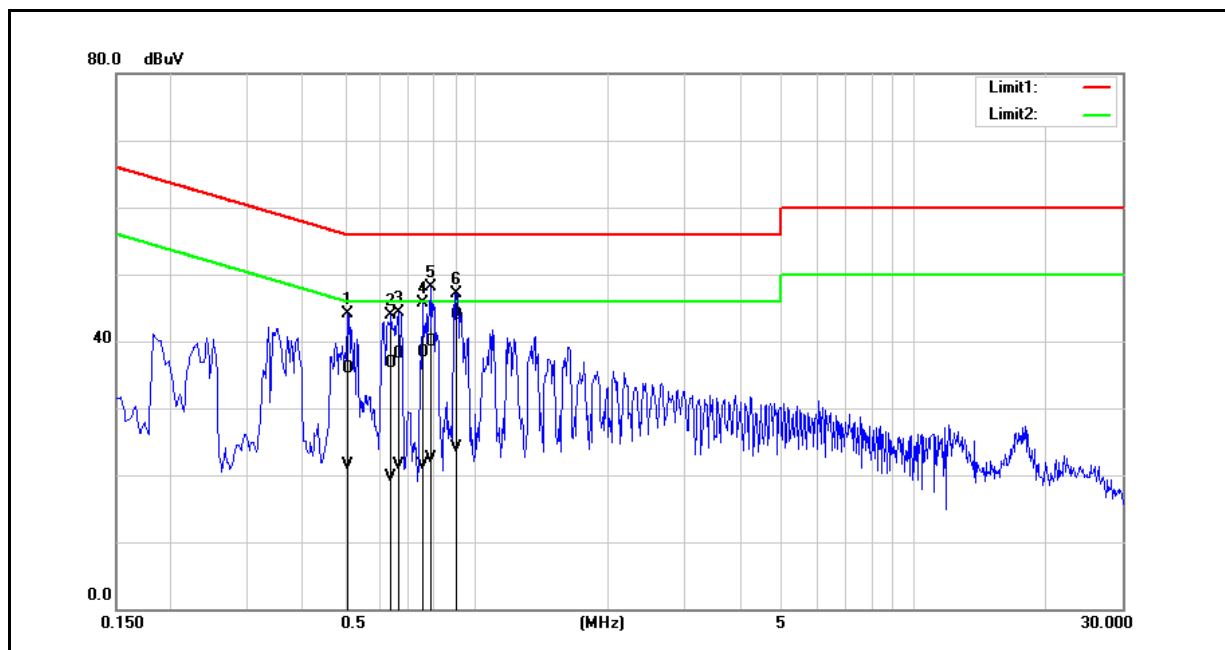


No.	Frequency (MHz)	QP reading (dBμV)	AVG reading (dBμV)	Correction factor (dB)	QP result (dBμV)	AVG result (dBμV)	QP limit (dBμV)	AVG limit (dBμV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.6300	24.68	11.84	9.71	34.39	21.55	56.00	46.00	-21.61	-24.45	Pass
2	0.6740	25.63	12.01	9.71	35.34	21.72	56.00	46.00	-20.66	-24.28	Pass
3	0.7700	27.61	10.07	9.71	37.32	19.78	56.00	46.00	-18.68	-26.22	Pass
4	0.7940	30.32	11.37	9.71	40.03	21.08	56.00	46.00	-15.97	-24.92	Pass
5	0.9140	29.01	10.26	9.71	38.72	19.97	56.00	46.00	-17.28	-26.03	Pass
6	1.0900	22.03	6.33	9.71	31.74	16.04	56.00	46.00	-24.26	-29.96	Pass

Note: 1. Result (dBμV) = Correction factor (dB) + Reading(dBμV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15.225	Line:	N
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Transmit Mode		
Description:			



No.	Frequency (MHz)	QP reading (dBμV)	AVG reading (dBμV)	Correction factor (dB)	QP result (dBμV)	AVG result (dBμV)	QP limit (dBμV)	AVG limit (dBμV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.5100	26.21	11.93	9.66	35.87	21.59	56.00	46.00	-20.13	-24.41	Pass
2	0.6380	27.03	10.12	9.67	36.70	19.79	56.00	46.00	-19.30	-26.21	Pass
3	0.6660	28.39	11.78	9.67	38.06	21.45	56.00	46.00	-17.94	-24.55	Pass
4	0.7540	28.60	11.79	9.67	38.27	21.46	56.00	46.00	-17.73	-24.54	Pass
5	0.7900	30.19	12.82	9.67	39.86	22.49	56.00	46.00	-16.14	-23.51	Pass
6	0.9020	34.16	14.51	9.68	43.84	24.19	56.00	46.00	-12.16	-21.81	Pass

Note: 1. Result (dBμV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Model Number: CD1

Module 1

Standard: FCC Part 15.225

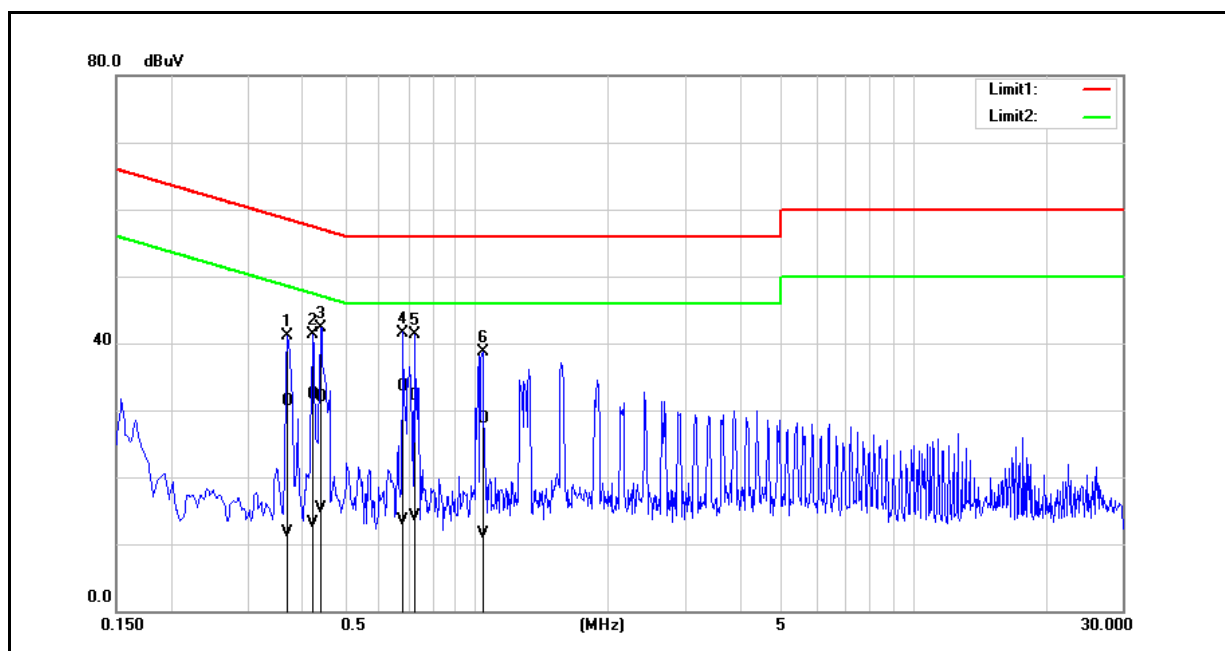
Line: L1

Test item: Conducted Emission

Power: AC 120 V/60 Hz

Mode: Transmit Mode

Description:

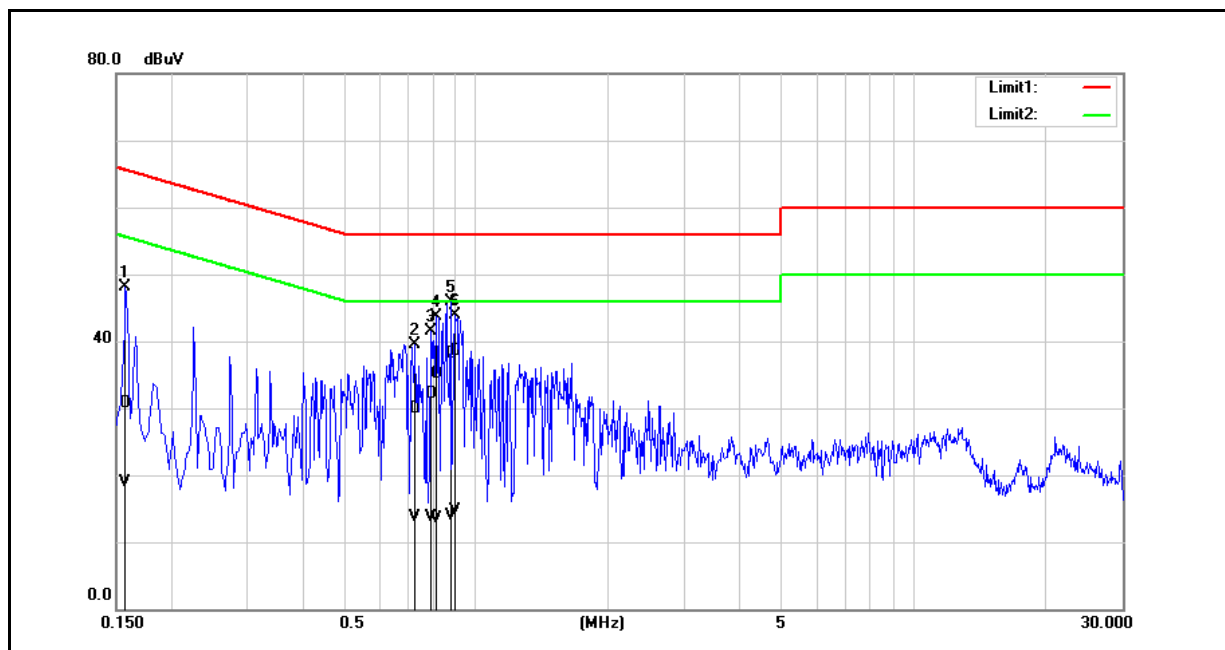


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.3700	21.54	2.01	9.71	31.25	11.72	58.50	48.50	-27.25	-36.78	Pass
2	0.4220	22.51	3.39	9.71	32.22	13.10	57.41	47.41	-25.19	-34.31	Pass
3	0.4420	22.23	5.53	9.71	31.94	15.24	57.02	47.02	-25.08	-31.78	Pass
4	0.6820	23.86	3.87	9.71	33.57	13.58	56.00	46.00	-22.43	-32.42	Pass
5	0.7220	22.43	4.40	9.71	32.14	14.11	56.00	46.00	-23.86	-31.89	Pass
6	1.0340	18.99	1.75	9.71	28.70	11.46	56.00	46.00	-27.30	-34.54	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15.225	Line:	N
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Transmit Mode		
Description:			



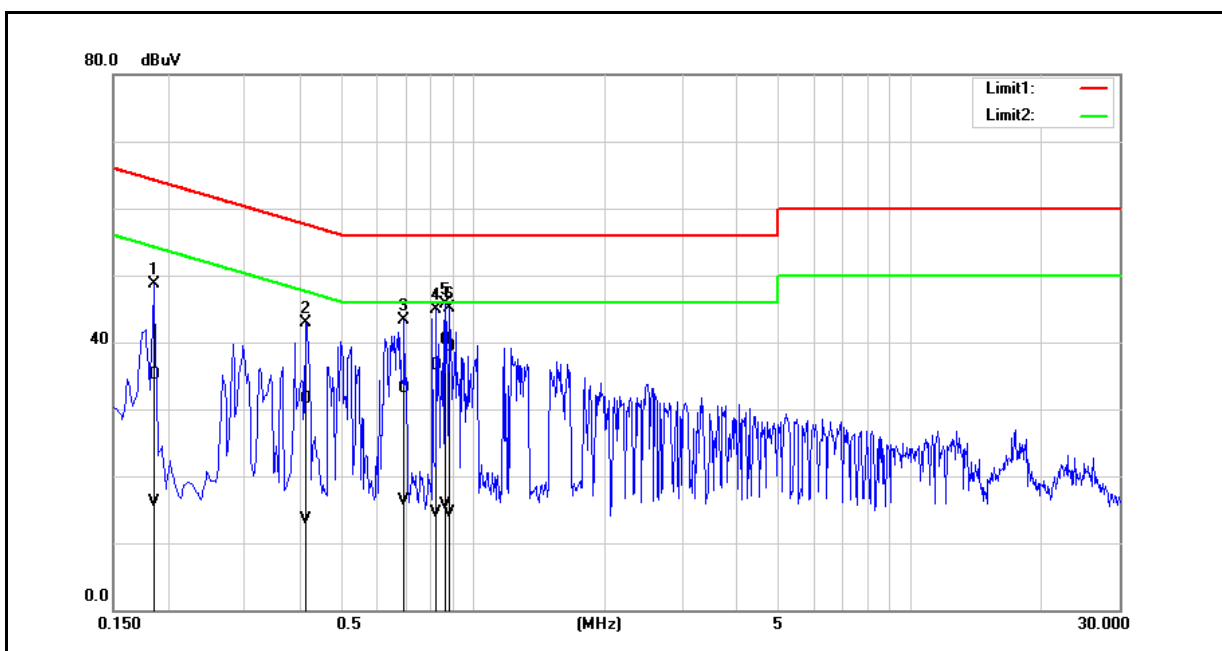
No.	Frequency (MHz)	QP reading (dBμV)	AVG reading (dBμV)	Correction factor (dB)	QP result (dBμV)	AVG result (dBμV)	QP limit (dBμV)	AVG limit (dBμV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1580	21.02	9.23	9.62	30.64	18.85	65.57	55.57	-34.93	-36.72	Pass
2	0.7260	20.21	4.07	9.67	29.88	13.74	56.00	46.00	-26.12	-32.26	Pass
3	0.7860	22.53	4.09	9.67	32.20	13.76	56.00	46.00	-23.80	-32.24	Pass
4	0.8100	25.53	3.93	9.67	35.20	13.60	56.00	46.00	-20.80	-32.40	Pass
5	0.8740	28.44	4.32	9.67	38.11	13.99	56.00	46.00	-17.89	-32.01	Pass
6	0.8980	28.87	4.93	9.68	38.55	14.61	56.00	46.00	-17.45	-31.39	Pass

Note: 1. Result (dBμV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Model Number: CD1	Module 2
-------------------	----------

Standard:	FCC Part 15.225	Line:	L1
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Transmit Mode		
Description:			

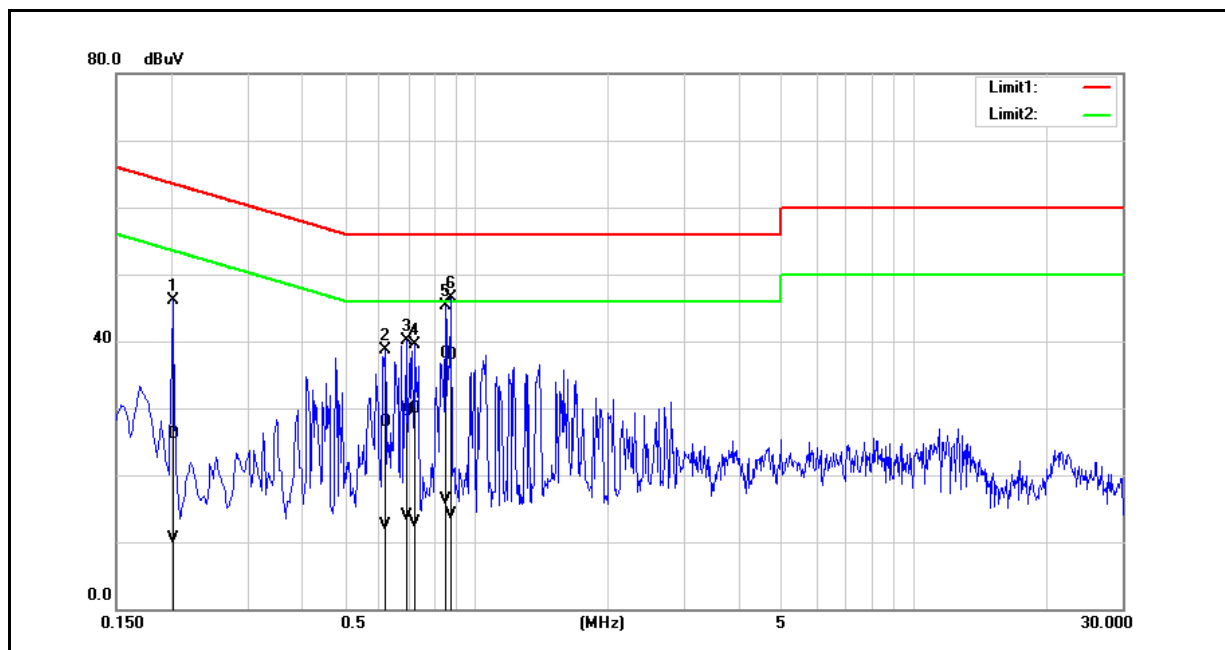


No.	Frequency (MHz)	QP reading (dBμV)	AVG reading (dBμV)	Correction factor (dB)	QP result (dBμV)	AVG result (dBμV)	QP limit (dBμV)	AVG limit (dBμV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1860	25.43	6.41	9.69	35.12	16.10	64.21	54.21	-29.09	-38.11	Pass
2	0.4140	21.76	3.84	9.71	31.47	13.55	57.57	47.57	-26.10	-34.02	Pass
3	0.6940	23.31	6.57	9.71	33.02	16.28	56.00	46.00	-22.98	-29.72	Pass
4	0.8220	26.74	4.80	9.71	36.45	14.51	56.00	46.00	-19.55	-31.49	Pass
5	0.8620	30.59	5.98	9.70	40.29	15.68	56.00	46.00	-15.71	-30.32	Pass
6	0.8820	29.57	4.89	9.71	39.28	14.60	56.00	46.00	-16.72	-31.40	Pass

Note: 1. Result (dBμV) = Correction factor (dB) + Reading(dBμV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15.225	Line:	N
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Transmit Mode		
Description:			



No.	Frequency (MHz)	QP reading (dBμV)	AVG reading (dBμV)	Correction factor (dB)	QP result (dBμV)	AVG result (dBμV)	QP limit (dBμV)	AVG limit (dBμV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2020	16.39	0.81	9.64	26.03	10.45	63.53	53.53	-37.50	-43.08	Pass
2	0.6180	18.24	2.94	9.66	27.90	12.60	56.00	46.00	-28.10	-33.40	Pass
3	0.6900	19.86	4.15	9.67	29.53	13.82	56.00	46.00	-26.47	-32.18	Pass
4	0.7260	20.19	3.26	9.67	29.86	12.93	56.00	46.00	-26.14	-33.07	Pass
5	0.8500	28.52	6.67	9.67	38.19	16.34	56.00	46.00	-17.81	-29.66	Pass
6	0.8780	28.24	4.41	9.68	37.92	14.09	56.00	46.00	-18.08	-31.91	Pass

Note: 1. Result (dBμV) = Correction factor (dB) + Reading(dBuV).

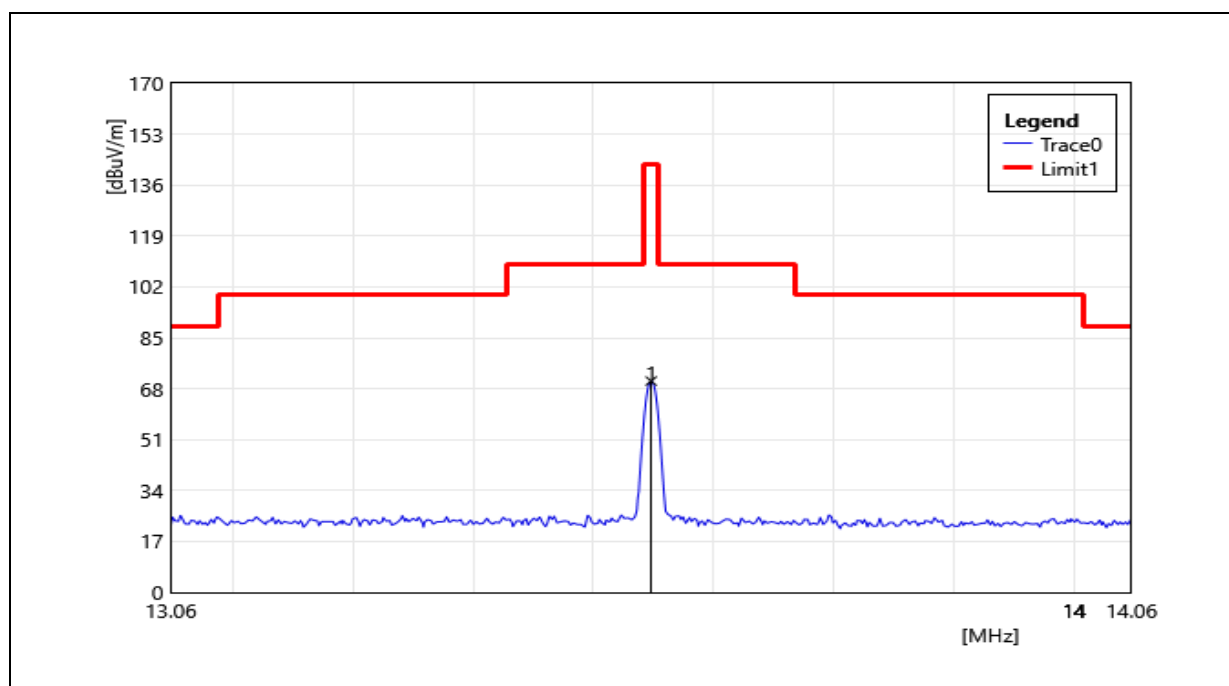
2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

5.2. Radiated Emission Measurement

Model Number: CD2	Module 1
-------------------	----------

Fundamental

Standard:	Part 15.225	Test Distance:	1 m
Test item:	Fundamental		
Mode:	Transmit Mode		
Ant. Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Near-Field Result (dBuV/m)	Derived Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	13.5600	54.94	15.64	70.58	30.11	84.00	-53.89	PEAK

Note: The level is measured at 1 meter and is converted into result at 30 meter.

The converted formula listed below:

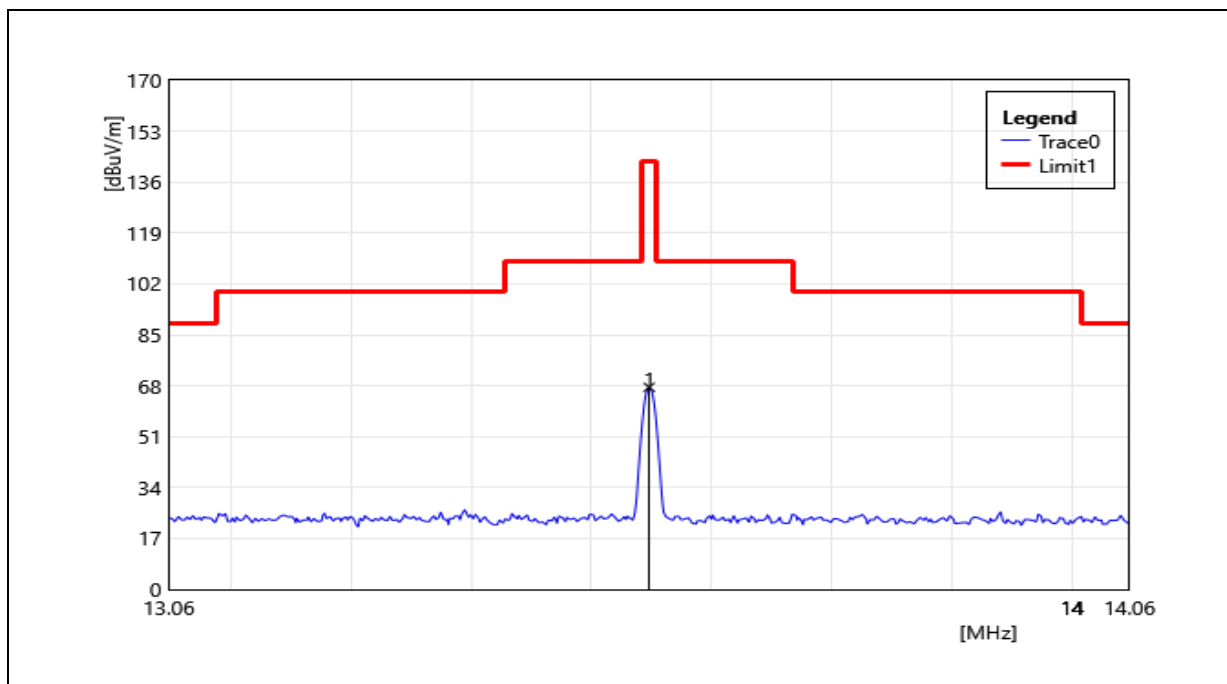
Measure result (1 meter distance): a

Compute result (30 meter distance): A

$d_{\text{near field}} = \lambda / 2\pi$, $d_{\text{measure}} = 1$ meter distance

$A = a - 40 \cdot \log(d_{\text{near field}} / d_{\text{measure}}) - 20 \cdot \log(d_{\text{limit}} / d_{\text{near field}})$

Standard:	Part 15.225	Test Distance:	1 m
Test item:	Fundamental		
Mode:	Transmit Mode		
Ant. Polar.:	Vertical		



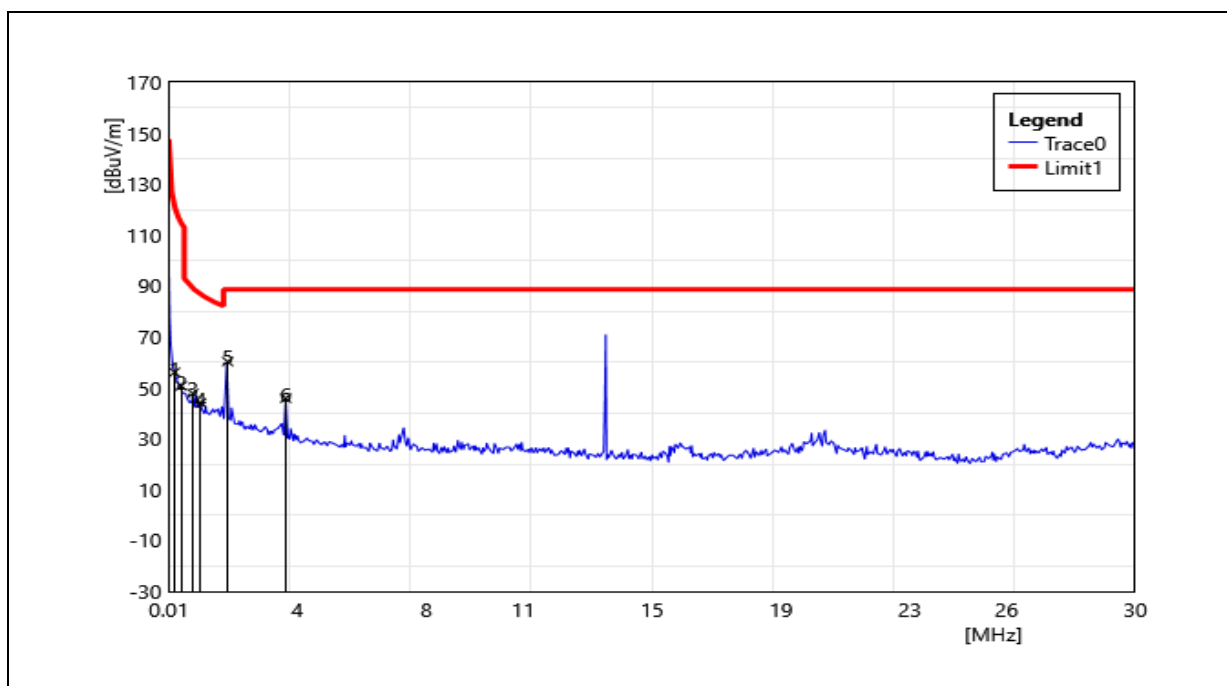
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Near-Field Result (dBuV/m)	Derived Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	13.5600	51.88	15.64	67.52	27.05	84.00	-56.95	PEAK

Note: The level is measured at 1 meter and is converted into result at 30 meter.

Harmonic

9 kHz ~ 30 MHz:

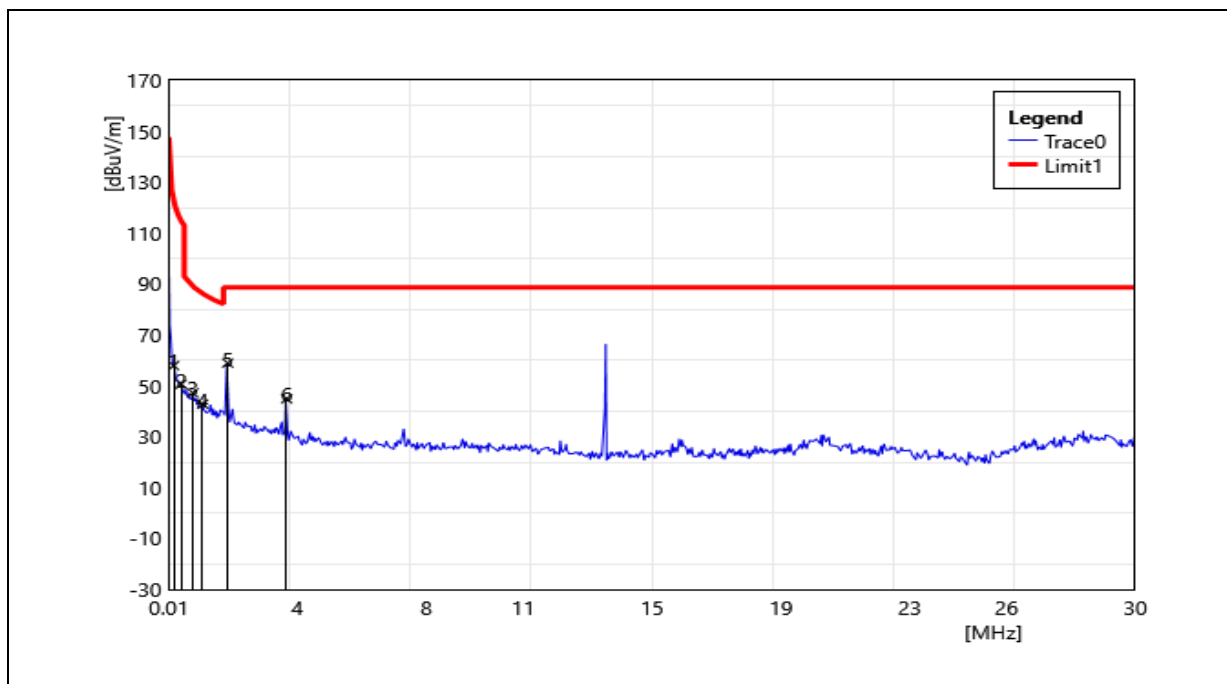
Standard:	Part 15.225	Test Distance:	300/30 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Near-Field Result (dBuV/m)	Derived Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.19	42.40	13.71	56.11	-41.44	22.03	-63.47	PEAK
2	0.4	36.63	14.10	50.73	-40.35	15.56	-55.91	PEAK
3	0.76	33.56	14.26	47.82	-17.68	29.99	-47.67	PEAK
4	1	29.70	14.36	44.06	-19.06	27.60	-46.67	PEAK
5	1.84	45.73	14.56	60.29	2.46	29.54	-27.08	PEAK
6	3.64	31.15	14.75	45.90	-6.00	29.54	-35.54	PEAK

Note: The level is measured at 1 meter and is converted into result at 300 or 30 meter.

Standard:	Part 15.225	Test Distance:	300/30 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Vertical		

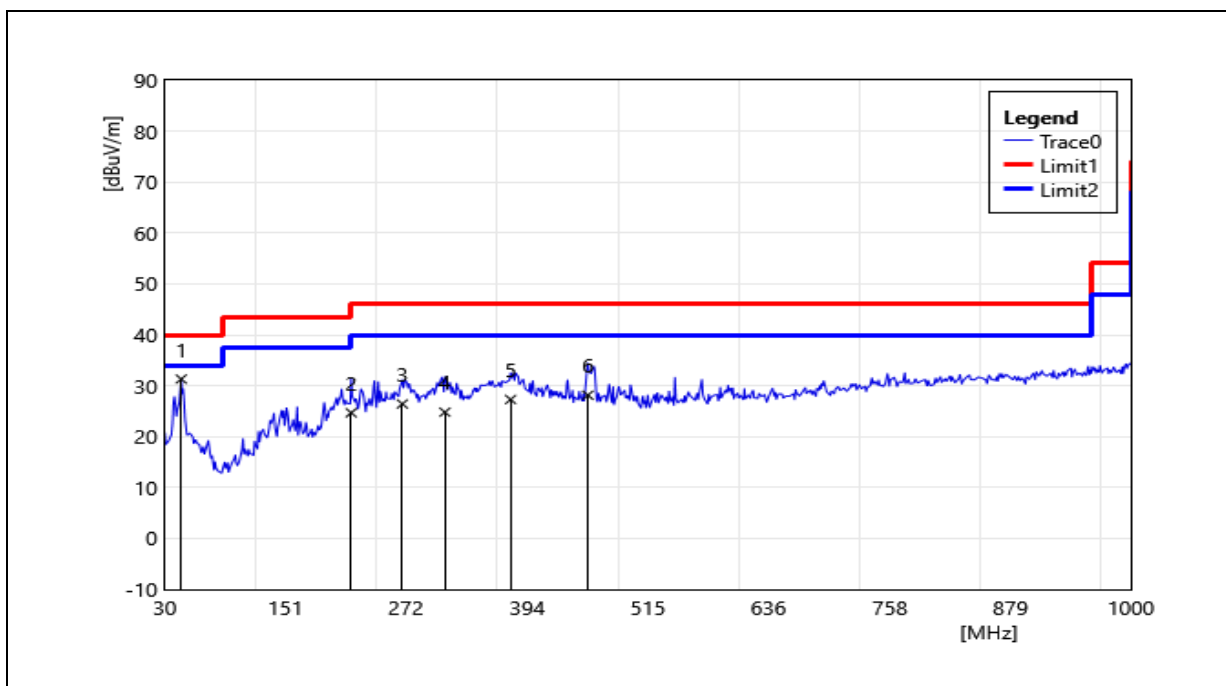


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Near-Field Result (dBuV/m)	Derived Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.16	44.29	13.62	57.91	-41.13	23.52	-64.65	PEAK
2	0.4	36.53	14.10	50.63	-40.45	15.56	-56.01	PEAK
3	0.76	32.96	14.26	47.22	-18.28	29.99	-48.27	PEAK
4	1.06	28.46	14.38	42.84	-19.77	27.10	-46.87	PEAK
5	1.84	44.35	14.56	58.91	1.08	29.54	-28.46	PEAK
6	3.67	30.12	14.75	44.87	-6.96	29.54	-36.50	PEAK

Note: The level is measured at 1 meter and is converted into result at 300 or 30 meter.

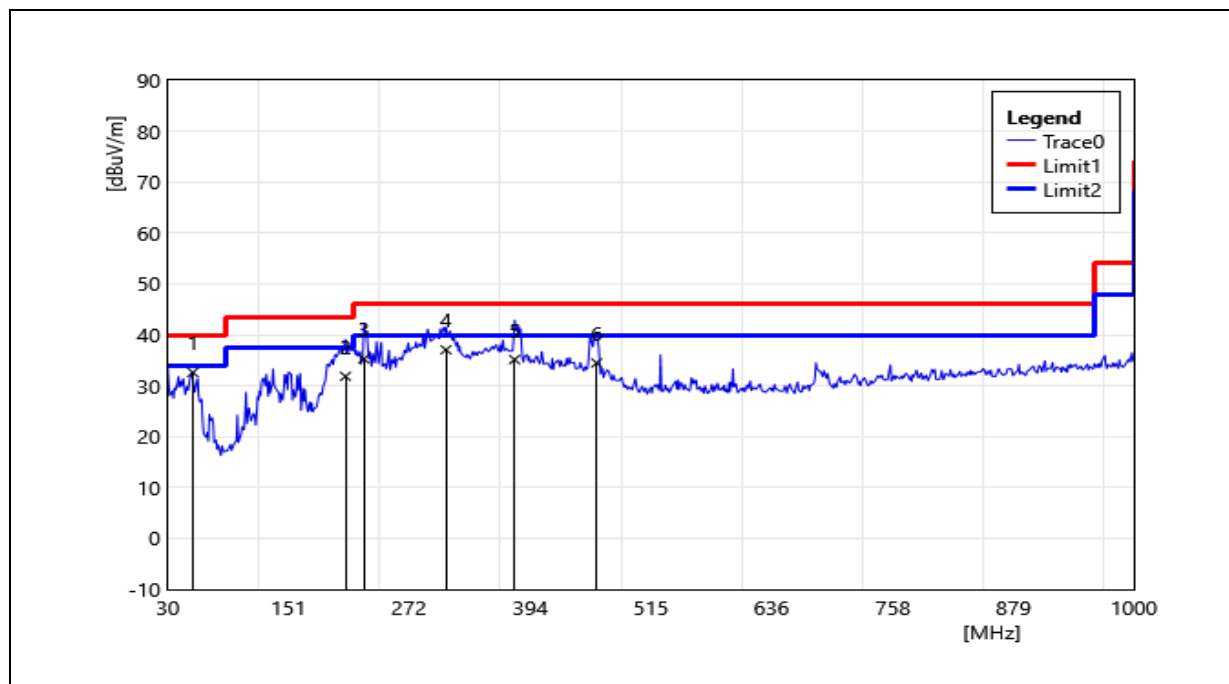
30 MHz ~ 1 GHz:

Standard:	Part 15.225	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	46.49	39.95	-8.62	31.33	40.00	-8.67	QP
2	217.21	33.87	-9.17	24.70	46.00	-21.30	QP
3	268.62	33.12	-6.70	26.42	46.00	-19.58	QP
4	311.30	30.72	-5.90	24.82	46.00	-21.18	QP
5	377.26	31.45	-4.13	27.32	46.00	-18.68	QP
6	454.86	31.36	-3.21	28.15	46.00	-17.85	QP

Standard:	Part 15.225	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	55.22	40.02	-7.40	32.62	40.00	-7.38	QP
2	208.48	41.46	-9.60	31.86	43.50	-11.64	QP
3	226.91	43.74	-8.46	35.28	46.00	-10.72	QP
4	309.36	43.03	-5.96	37.07	46.00	-8.93	QP
5	378.23	39.25	-4.10	35.15	46.00	-10.85	QP
6	460.68	37.57	-3.08	34.49	46.00	-11.51	QP

Model Number: CD1

Module 1

30 MHz ~ 1 GHz:

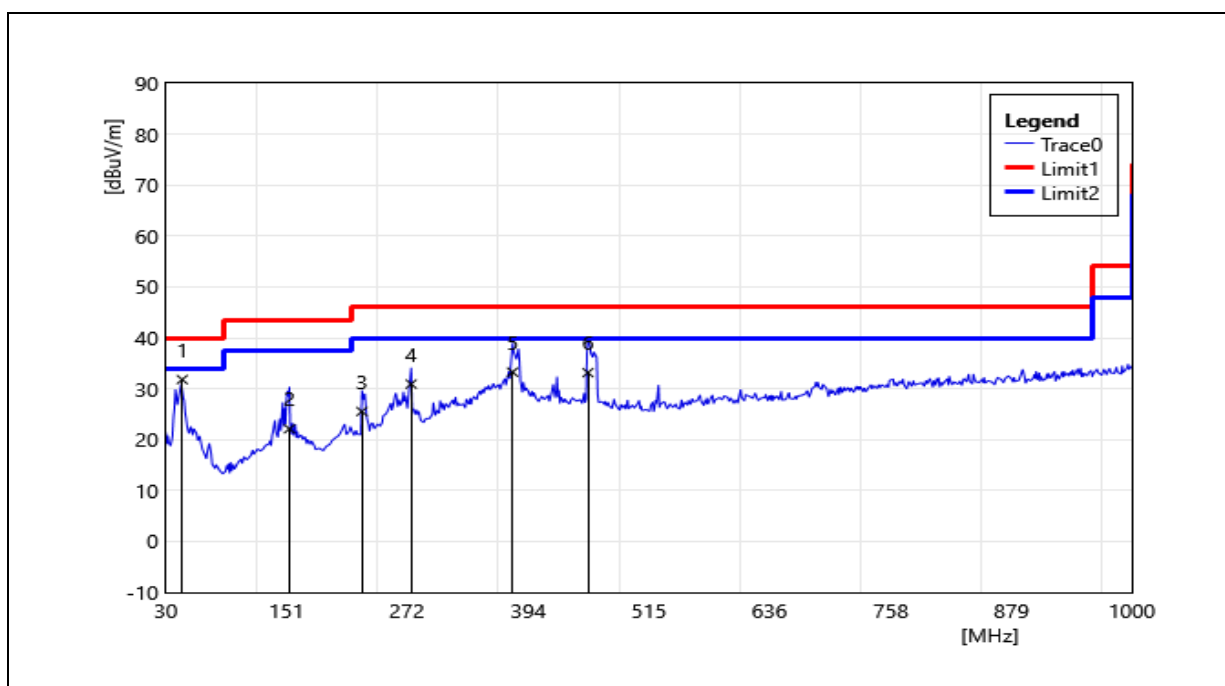
Standard: Part 15.225

Test Distance: 3 m

Test item: Harmonic

Mode: Transmit Mode

Ant. Polar.: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	46.49	40.43	-8.62	31.81	40.00	-8.19	QP
2	154.16	29.26	-7.12	22.14	43.50	-21.36	QP
3	226.91	34.00	-8.46	25.54	46.00	-20.46	QP
4	276.38	37.24	-6.31	30.93	46.00	-15.07	QP
5	378.23	37.38	-4.10	33.28	46.00	-12.72	QP
6	453.89	36.41	-3.23	33.18	46.00	-12.82	QP

Standard:	Part 15.225	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Vertical		



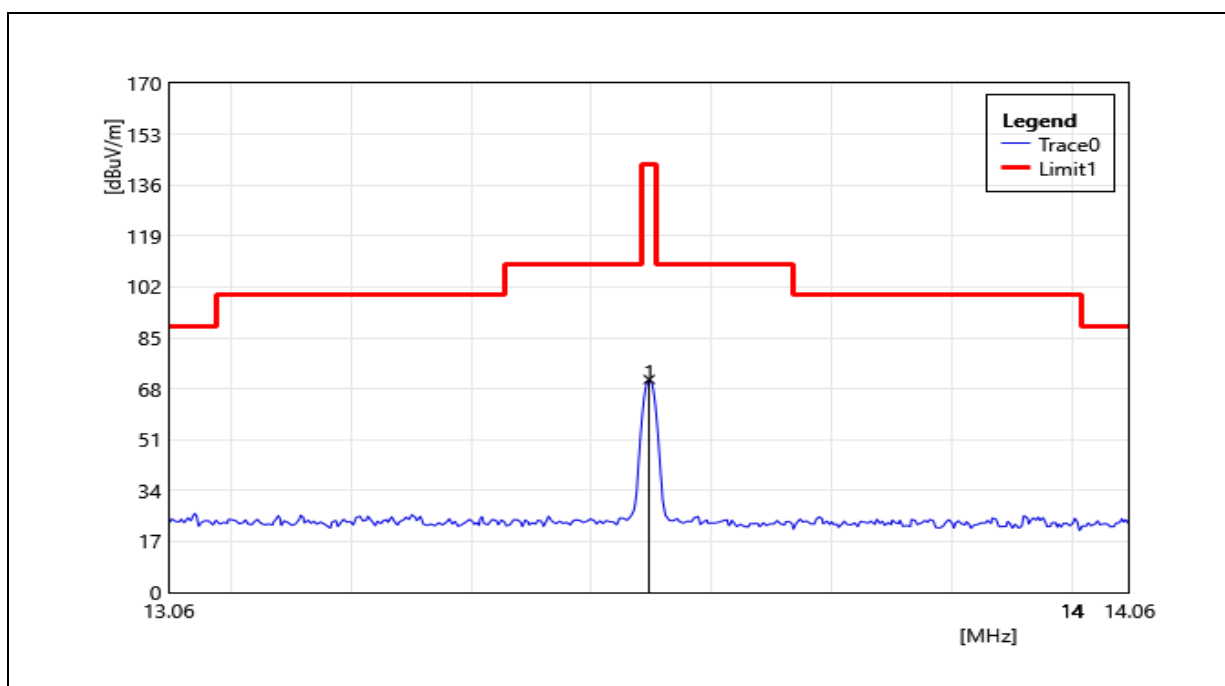
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	53.28	40.86	-9.49	31.37	40.00	-8.63	QP
2	203.63	35.73	-9.51	26.22	43.50	-17.28	QP
3	279.29	30.79	-6.20	24.59	46.00	-21.41	QP
4	437.40	31.38	-2.82	28.56	46.00	-17.44	QP
5	477.17	30.01	-2.69	27.32	46.00	-18.68	QP
6	526.64	27.98	-1.28	26.70	46.00	-19.30	QP

Model Number: CD2

Module 2

Fundamental

Standard:	Part 15.225	Test Distance:	1 m
Test item:	Fundamental		
Mode:	Transmit Mode		
Ant. Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Near-Field Result (dBuV/m)	Derived Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	13.5600	55.47	15.64	71.11	30.64	84.00	-53.36	PEAK

Note: The level is measured at 1 meter and is converted into result at 30 meter.

The converted formula listed below:

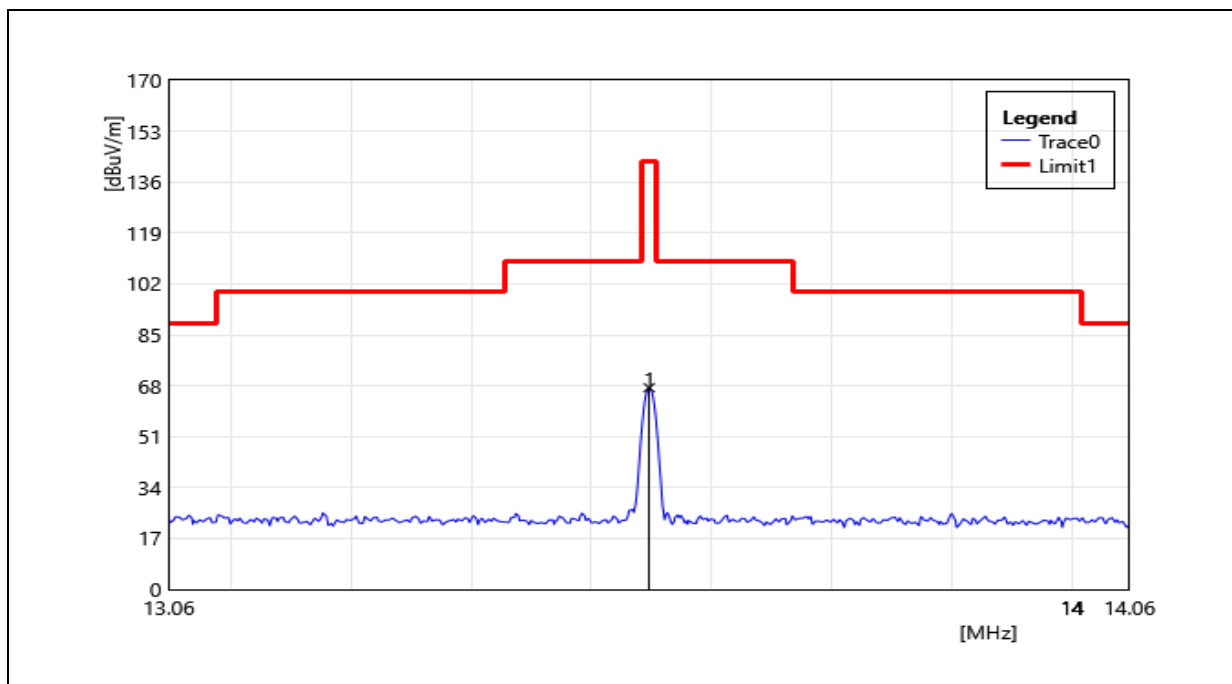
Measure result (1 meter distance): a

Compute result (30 meter distance): A

$d_{\text{near field}} = \lambda/2\pi$, $d_{\text{measure}} = 1$ meter distance

$A = a - 40 \cdot \log(d_{\text{near field}} / d_{\text{measure}}) - 20 \cdot \log(d_{\text{limit}} / d_{\text{near field}})$

Standard:	Part 15.225	Test Distance:	1 m
Test item:	Fundamental		
Mode:	Transmit Mode		
Ant. Polar.:	Vertical		



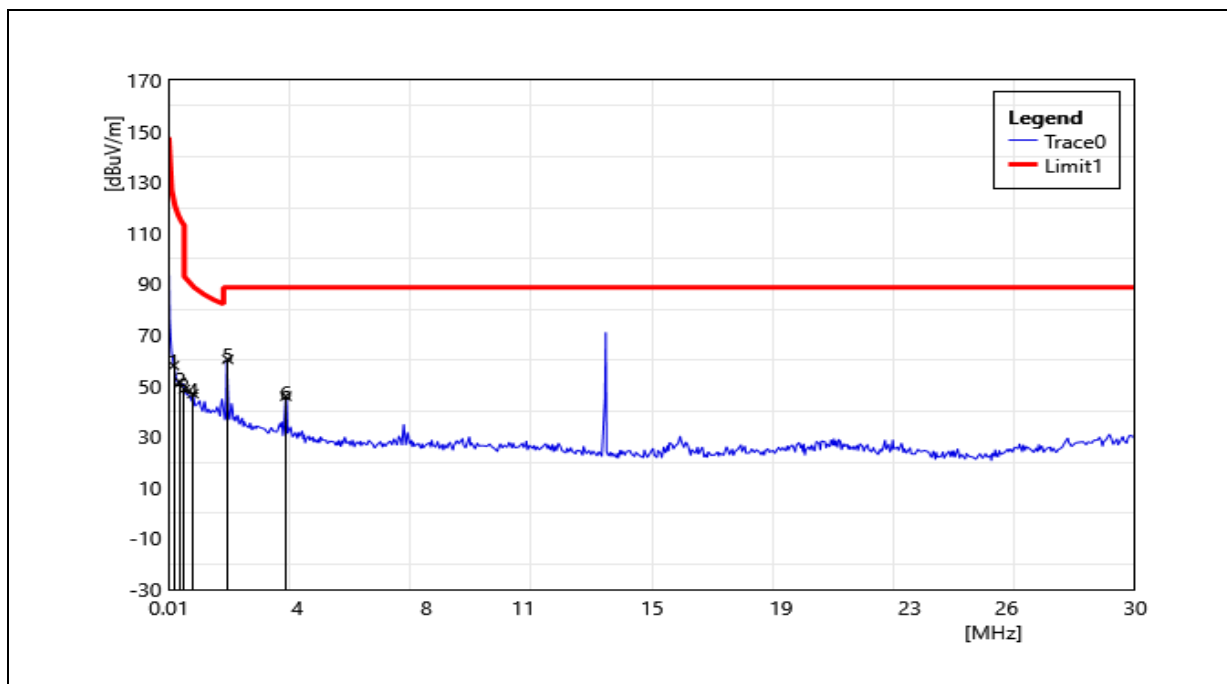
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Near-Field Result (dBuV/m)	Derived Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	13.5600	51.72	15.64	67.36	26.89	84.00	-57.11	PEAK

Note: The level is measured at 1 meter and is converted into result at 30 meter.

Harmonic

9 kHz ~ 30 MHz:

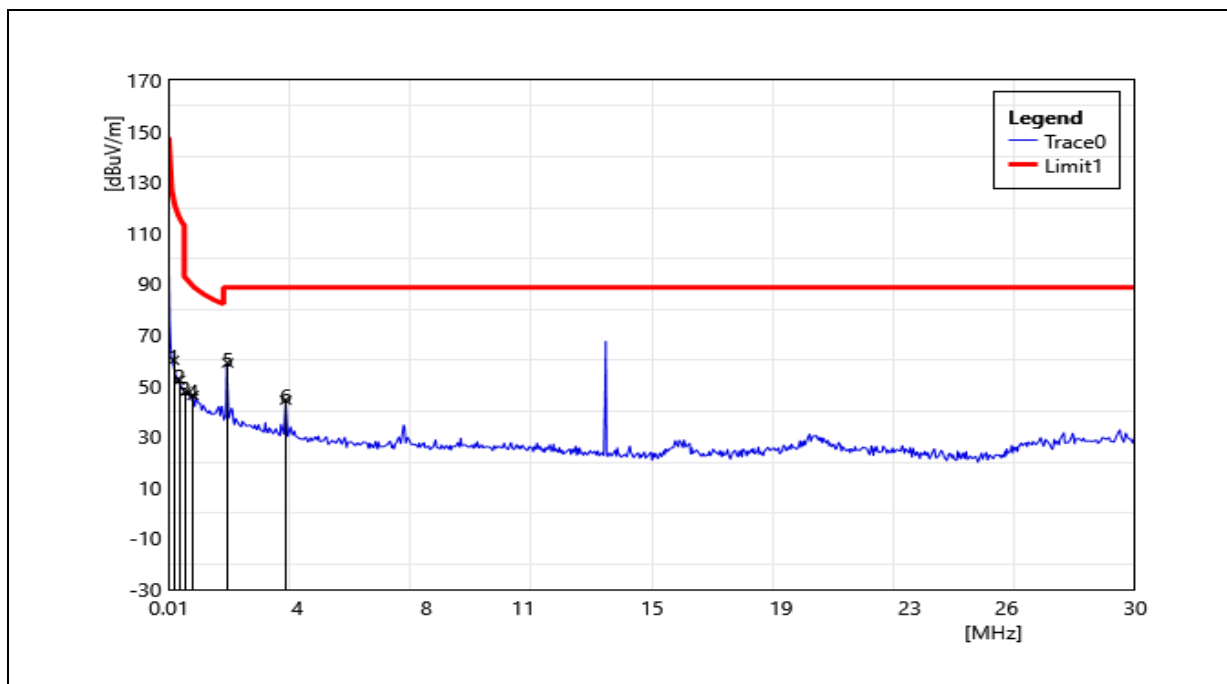
Standard:	Part 15.225	Test Distance:	300/30 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Near-Field Result (dBuV/m)	Derived Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.16	44.32	13.62	57.94	-41.10	23.52	-64.62	PEAK
2	0.37	37.24	14.08	51.32	-40.44	16.24	-56.68	PEAK
3	0.49	34.47	14.15	48.62	-40.70	13.80	-54.50	PEAK
4	0.76	32.65	14.26	46.91	-18.59	29.99	-48.58	PEAK
5	1.84	45.82	14.56	60.39	2.56	29.54	-26.98	PEAK
6	3.64	31.16	14.75	45.91	-5.99	29.54	-35.53	PEAK

Note: The level is measured at 1 meter and is converted into result at 300 or 30 meter.

Standard:	Part 15.225	Test Distance:	300/30 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Vertical		

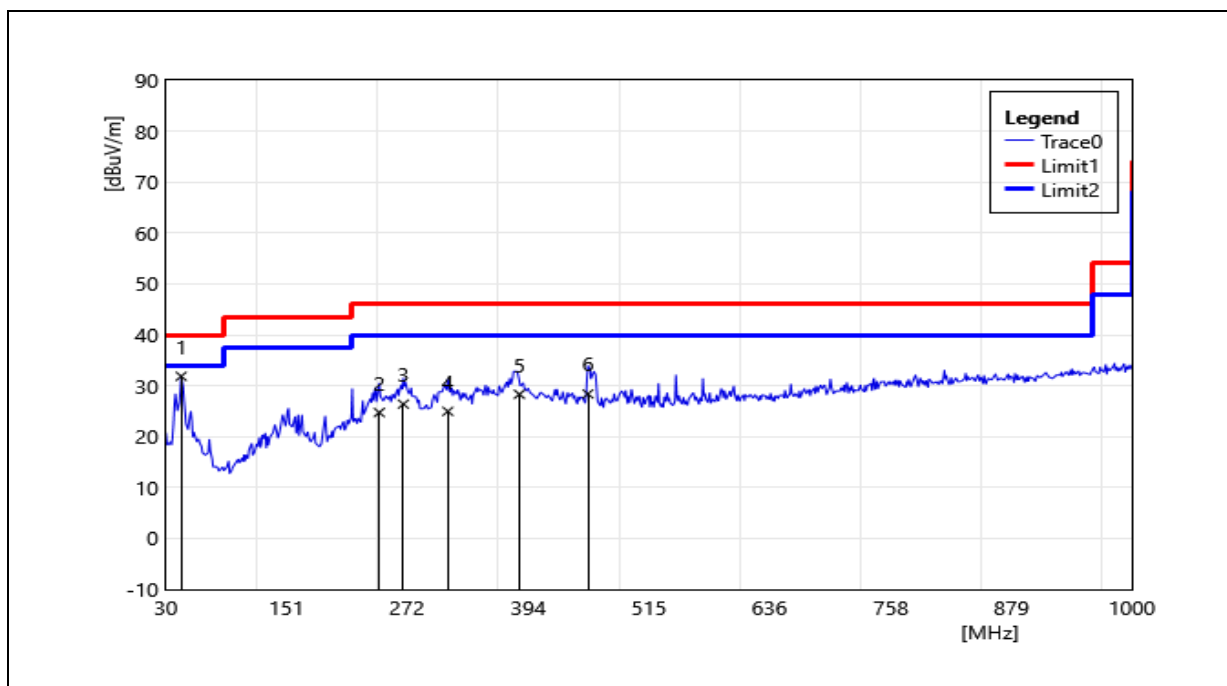


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Near-Field Result (dBuV/m)	Derived Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.16	46.42	13.62	60.04	-39.00	23.52	-62.52	PEAK
2	0.34	38.15	14.07	52.22	-40.27	16.97	-57.25	PEAK
3	0.52	33.60	14.16	47.76	-21.04	33.28	-54.33	PEAK
4	0.76	31.95	14.26	46.21	-19.29	29.99	-49.28	PEAK
5	1.84	44.42	14.56	58.98	1.15	29.54	-28.39	PEAK
6	3.64	29.64	14.75	44.39	-7.51	29.54	-37.05	PEAK

Note: The level is measured at 1 meter and is converted into result at 300 or 30 meter.

30 MHz ~ 1 GHz:

Standard:	Part 15.225	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	45.52	40.83	-8.98	31.85	40.00	-8.15	QP
2	244.37	32.36	-7.61	24.75	46.00	-21.25	QP
3	268.62	33.11	-6.70	26.41	46.00	-19.59	QP
4	313.24	30.81	-5.84	24.97	46.00	-21.03	QP
5	385.02	32.24	-3.91	28.33	46.00	-17.67	QP
6	453.89	31.62	-3.23	28.39	46.00	-17.61	QP

Standard:	Part 15.225	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	55.22	41.58	-7.40	34.18	40.00	-5.82	QP
2	210.42	41.21	-9.22	31.99	43.50	-11.51	QP
3	226.91	43.76	-8.46	35.30	46.00	-10.70	QP
4	305.48	42.94	-6.07	36.87	46.00	-9.13	QP
5	379.20	39.29	-4.07	35.22	46.00	-10.78	QP
6	460.68	37.59	-3.08	34.51	46.00	-11.49	QP

Model Number: CD1

Module 2

30 MHz ~ 1 GHz:

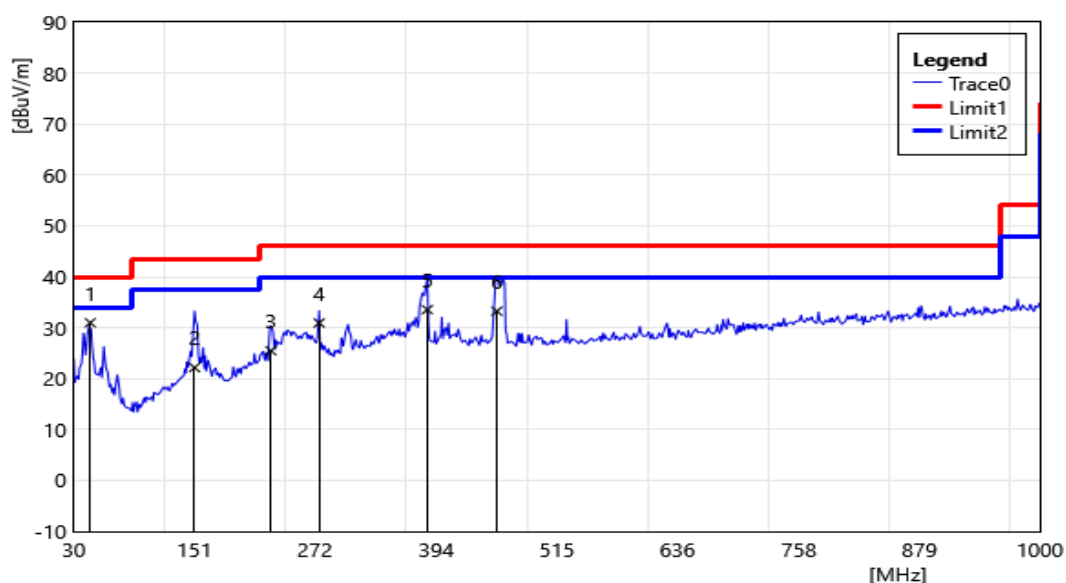
Standard: Part 15.225

Test Distance: 3 m

Test item: Harmonic

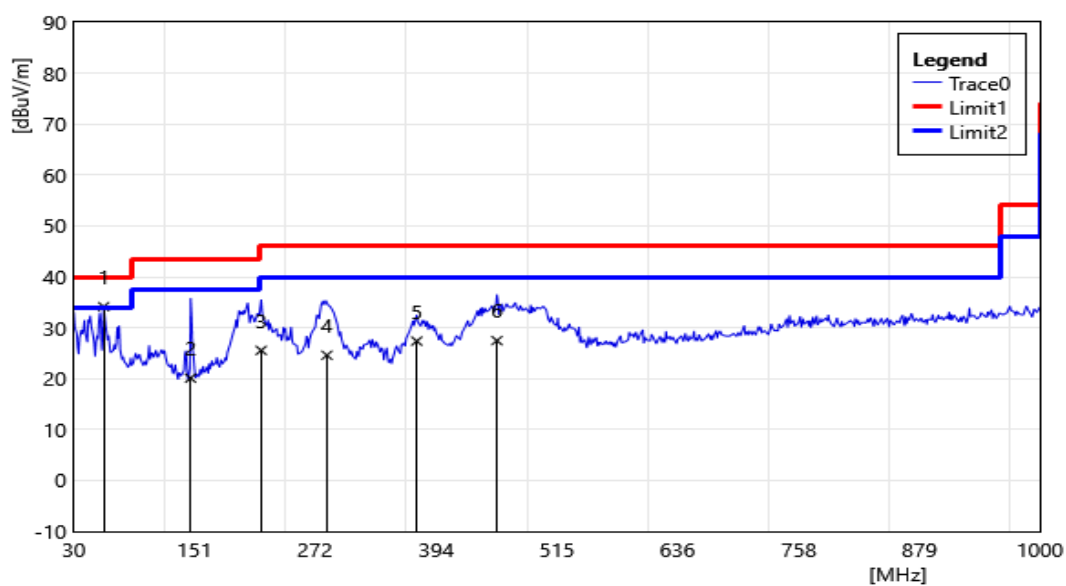
Mode: Transmit Mode

Ant. Polar.: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	46.49	39.60	-8.62	30.98	40.00	-9.02	QP
2	151.25	29.42	-7.23	22.19	43.50	-21.31	QP
3	227.88	33.92	-8.43	25.49	46.00	-20.51	QP
4	276.38	37.26	-6.31	30.95	46.00	-15.05	QP
5	385.02	37.48	-3.91	33.57	46.00	-12.43	QP
6	454.86	36.48	-3.21	33.27	46.00	-12.73	QP

Standard:	Part 15.225	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Transmit Mode		
Ant. Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	60.07	42.41	-8.26	34.15	40.00	-5.85	QP
2	147.37	27.44	-7.33	20.11	43.50	-23.39	QP
3	218.18	34.73	-9.17	25.56	46.00	-20.44	QP
4	284.14	30.62	-6.01	24.61	46.00	-21.39	QP
5	374.35	31.59	-4.21	27.38	46.00	-18.62	QP
6	454.86	30.70	-3.21	27.49	46.00	-18.51	QP

5.3. Conducted Test Results

Frequency Stability Measurement

Temperature Variations

Test Mode		Transmit Mode					
Temp. (°C)	Voltage (VAC)	0 minute Frequency Tolerance (%)	2 minutes Frequency Tolerance (%)	5 minutes Frequency Tolerance (%)	10 minutes Frequency Tolerance (%)	Limit (%)	Result (Pass/Fail)
-20	V _{Nom}	-0.0007	-0.0015	-0.0007	-0.0015	±0.01	Pass
-10	V _{Nom}	-0.0007	-0.0007	-0.0015	-0.0015	±0.01	Pass
0	V _{Nom}	-0.0007	0.0000	-0.0007	-0.0007	±0.01	Pass
10	V _{Nom}	-0.0007	-0.0007	0.0000	-0.0007	±0.01	Pass
20	V _{Nom}	-0.0007	0.0000	-0.0007	-0.0007	±0.01	Pass
30	V _{Nom}	-0.0007	0.0000	0.0000	0.0000	±0.01	Pass
40	V _{Nom}	0.0007	0.0007	0.0000	0.0000	±0.01	Pass
50	V _{Nom}	-0.0007	0.0000	0.0007	0.0000	±0.01	Pass

Voltage Variations

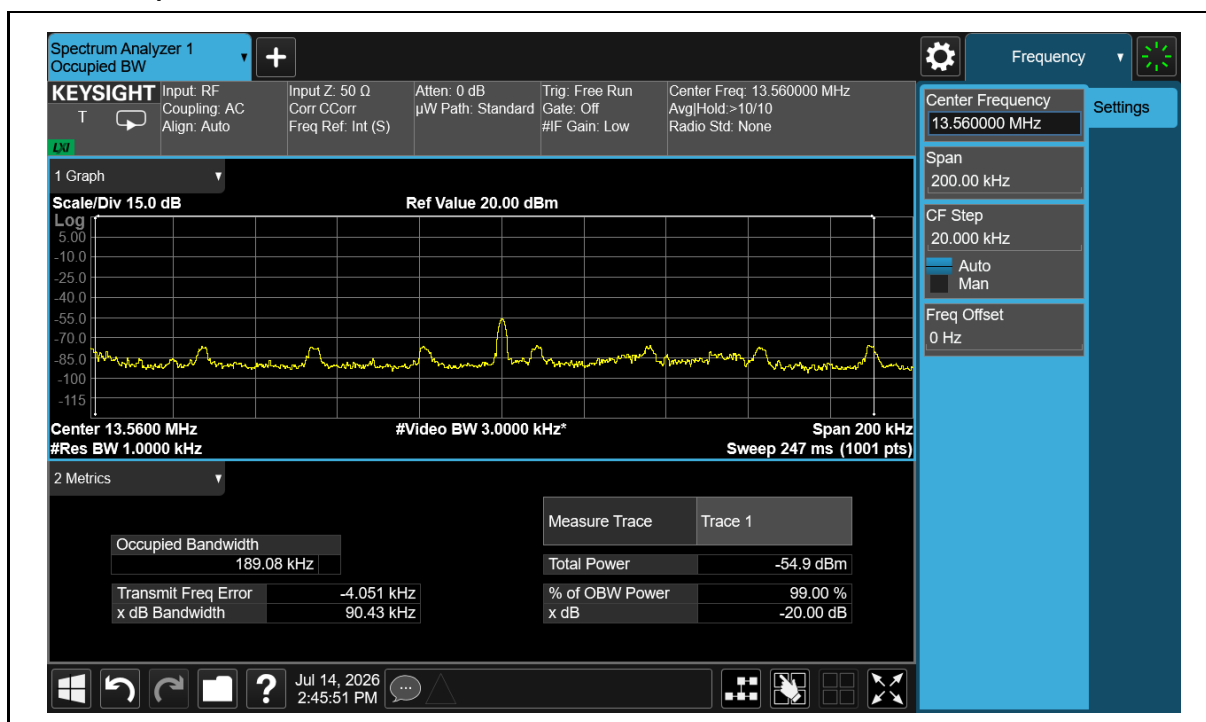
Test Mode		Transmit Mode					
Temp. (°C)	Voltage (VAC)	0 minute Frequency Tolerance (%)	2 minutes Frequency Tolerance (%)	5 minutes Frequency Tolerance (%)	10 minutes Frequency Tolerance (%)	Limit (%)	Result (Pass/Fail)
20	V _{Low}	0.0000	-0.0007	-0.0007	-0.0007	±0.01	Pass
	V _{Nom}	-0.0007	0.0000	-0.0007	-0.0007	±0.01	Pass
	V _{High}	-0.0007	-0.0007	0.0000	-0.0007	±0.01	Pass

Note: V_{Low}=V_{Nom}-15 % ; V_{High}=V_{Nom}+15 %

20 dB Bandwidth Measurement

Test Mode	Transmit Mode
Frequency (MHz)	20 dB Bandwidth (kHz)
13.56	189.08

Test Graphs



---END---